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IT resources in SA schools

Kobus van Wyk, head of e-learning and education at Mustek discusses the importance of learning institutions to create strategies for the optimal usage of the IT resources available to them, and the role of the computer laboratory in the age of tablet pervasiveness.



Kobus van Wyk

With the growing trend towards mobility and the popularity of tablets in the field of education, is there still a role for a dedicated computer laboratory?

Kobus van Wyk: Yes, there most definitely is a role for computer labs at schools. Tablets are, of course, wonderful devices for providing children with a one-to-one learning experience, but computer labs can still be used effectively.

Consider a school where you have 1,000 learners and a laboratory with 25 computers. With a ratio of one computer to 40 learners, the only way to achieve equity of use is by circulating the learners in groups through the computer lab. It is not the ideal situation, but with good scheduling all learners in the school will get an opportunity to engage with technology. If you replaced the computer lab with 25 mobile devices, it would be difficult to achieve the same effect.

Computers in a computer lab can be used in the same way as tablets are used: for reinforcement (such as building mathematical skills), doing research and collaborating with other students.

I Is it a case of either/or: tablets in favour of desktops in the school or learning environments, or is there a place for both?

van Wyk: There is most definitely a place for both. The whole idea of using tablets (or other mobile devices) is for learners to have continuous access to technology as a learning tool.

A computer lab has the disadvantage of being physically separated from the classroom, hence making it more difficult for the teacher to integrate classroom teaching with what technology can offer. However, until such a time that every child in a

school has a mobile device, the computer lab will continue to fulfil an important role: it may be the only way in which to bring every learner in touch with technology.

It therefore makes sense to keep the computer room in good repair, while phasing in mobile devices - in big schools this may take a few years, owing to the high cost of technology. The need for a computer lab can be re-evaluated once a one-to-one state has been achieved, but until then, resist the temptation to dismantle the computer room in favour of mobile devices.

My advice to learning institutions is to continue using whatever technology is available, making sure that it is used optimally, and then adding more and new technologies.

Many school/learning institutions do have IT support facilities (naturally, some more sophisticated than others) but what would you regard as the ideal computer support set-up in a school environment?

van Wyk: Obviously, this is dependent on many factors, such as available funding, the location of the school, the incumbent computer set-up, etc. In an ideal situation, as a starting point, one would have an IT technician located at the school, or utilise the services of a company to provide technical support.

Teachers are not technicians and one cannot expect them to perform technical support services, while their main focus should be teaching. Technology that does not work when it is needed is rather disruptive, so provision must be made for technical support to ensure ongoing functionality.

When it comes to the education side of things, the aim is to ensure that technology is being integrated into the curriculum delivery process. A support system must be in place to guarantee that teachers are skilled in leveraging technology for teaching and learning. The role of the teacher is at the heart of successful use of technology; it follows that the teacher must become a skilled facilitator in knowledge transferal.

There is a lot of talk about the "interactive classroom". What is this all about?

van Wyk: I think you can turn that around and say what it is not. Consider the traditional scenario of a teacher standing in front of a class, on the "stage" as it were, lecturing to the students. This hardly provides an environment conducive for students to truly engage with the content and convert this into acquired knowledge.

In an "interactive classroom" this changes; the learner interacts actively with the learning material. Interactive devices, such as interactive whiteboards, can assist with this process, since it can help the teacher to make the information come alive through video clips, animations, and even getting students to come up to the board to select, drag and drop.

It must be noted, however, that neither the mere presence of technology, nor the fact that a learner interacts with technology, will transform a classroom into an interactive one. A truly interactive classroom is one where the learners interact with the learning content; interactivity depends on the way the technology is used by a skilled teacher to encourage learners to interact with the content.

So you are saying that the interactive environment is not only about the technology available?

van Wyk: Absolutely! Technology is a powerful tool, but it is merely an enabler in the interactive classroom. The way the teacher uses it is critical in determining the success of the learning experience; with skilful use of technology, the possibilities for knowledge creation are endless.

Technology enables a teacher to "flip" his classrooms: instead of just lecturing, he can record lectures in video format (or sometimes use even YouTube videos) and make these available to learners before coming to class. Contact time can then be devoted to discussion, sharing perspectives between learners, allowing for a far more in-depth engagement with the content than if just being presented in lecture format. You see, that's why I say creativity in using technology is the key.

What are the biggest barriers/challenges that you see in creating truly interactive IT environments at schools?

van Wyk: Of course, the cost of technology itself is a barrier, but a far greater one is the ability of teachers to use it optimally; how to integrate technology into teaching is a challenge. Programmes are in place from both the private sector and government to address these barriers, but it won't happen overnight.

Finally, what is your opinion on the state of technology usage in the classroom environment in South Africa at present?

van Wyk:In the more affluent schools, or the schools where technology has been used for some time, there is some exceptional innovative usage, which places us in a competitive position relative to the international context. However, the schools that can benefit most from a technology injection are in most cases poor, both from a provisioning and a teacher skill perspective. Bridging this gap requires much more input from - and a partnership approach between - the state and industry alike.

I believe that the government and the education/technology industries must work together further to reduce bureaucratic processes, such as tenders or regulatory assignments, in order to ensure that the integration of technology into teaching becomes a reality in classrooms across the country.

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